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ECONOMIC CONVERGENCE VS. SOCIO-ECONOMIC CONVERGENCE IN SPACE

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ABSTRACT

This paper aims to present a new analysis framework for assessing disparities among regions (or countries). It combines both economic and social variables, where the economic attributes refer in particular to marked differences in consumption variables. This analysis is also appealing for spatial convergence analyses over time. In our paper, both economic and social variables are included as the basis of a logical operational scheme that is suitable for comparative research. In this scheme the economic aspects of living standards are represented by different categories of consumption expenditures, while the social aspects are represented by indicators of health, education, labour market conditions, etc. The analysis of a region's performance cannot be limited exclusively to either economic or social aspects, and hence our study aims to combine in an integrated framework both material (i.e., economic) and immaterial (i.e., social) aspects of society. In a time perspective, by introducing these concepts in the analysis of differences among regions, we may then be able to distinguish the concept of convergence into economic convergence and social convergence. Our analysis is illustrated by means of an empirical application to Italian data.

1 WELFARE DISPARITIES: INTRODUCTION

Since the days of Adam Smith, when the wealth of nations was explicitly addressed as a central policy and research issue, economists have been puzzled by the emergence and persistence of welfare disparities among nations or regions. This phenomenon has led to a continuous flow of both theoretical and applied studies that aim to investigate the causes and consequences of differences in welfare positions at national and regional levels. Many empirical contributions were based on extensive statistical data bases that were suitable for cross-country comparisons.

Most commonly, many international comparisons of the economic performance of countries used to assess the level of development (or growth therein) in terms of gross domestic product (GDP). Differences in growth and development gaps among countries have traditionally been investigated and measured in terms of income levels per capita. And this has led to extensive international statistics on welfare differences.

It is noteworthy that this approach has also been strongly criticized. The most frequent criticism is based on the observation that the standard GDP index is not able to catch the different – sometimes mutually contrasting – dimensions of welfare; GDP is at best only a partial measure (or proxy) of a multi-dimensional concept of well-being (see Sen, 1985, 1987; Khan, 1991; and Dasgupta, 1990). For example, many externalities are not included in GDP (e.g., environmental decay), so that GDP is a biased measure for welfare comparisons.

In the last years, a new strand of literature has developed with specific attention for additional aspects of growth, convergence and social well-being. An original and stimulating study was offered in an article by Hobijn and Franses (2001). They drew the attention of economists to the need to extend the evaluation of a country's performance towards measures of living standards. They argued that convergence in income levels has an important similarity to the study of convergence in living standards (Hobijn and Franses, 2001, p.172). They re-addressed the convergence issue that has been so prominent in the economic growth literature and presented evidence that convergence in GDP does not necessarily imply convergence in living standards, the latter being defined by daily calorie supply, protein calorie supply, infant mortality, and life expectancy at birth. We will concisely present here a few recent studies on this topic, for the sake of illustration.

Neumayer (2003) has presented an interesting analysis of convergence in living standards that offers results that are in sharp contrast with the conclusions by Hobijn and Franses. He demonstrated that, in contrast to real GDP per capita, there is clear convergence in the basic attributes of living standards, when these are measured by life expectancy, infant survival, educational enrolment, literacy, and telephone and television availability or access.

Dowrick et al. (2003) developed a method of welfare comparison that incorporates both GDP and social indicators that may be regarded as proxies of well-being.

In the light of this literature, high levels of GDP and convergence in income alone are not sufficient to assess and to compare the performance of countries or regions. High levels of income may be a necessary condition to induce a convergence in standards of living, but countries with a high level of income may not necessarily achieve a good performance in living standards. In other words, high levels of income are a sine qua non to support a 'growth in quality'.

But, when does economic growth positively impact on the attribute of socio-economic quality? According to Cracolici and Vassallo (2002), if a country is able to generate itself high levels of real GDP and living standards, it may generate a growth in quality (see also UNDP 1996). One way to analyse the relevance of growth in quality is to assess the extent to which a high economic performance (e.g., measured by GDP) contributes to the well-being of a country (or region, province, etc.).

Clearly, the question arises: how to measure a growth in quality? The literature on well-being (such as the 'social indicators' school) has indicated many dimensions of it (see e.g. Ramos and Silber, 2005; Osberg and Sharpe, 2005). Well-being may be described by means of at least three distinct dimensions: material, immaterial and emotional attributes. In this paper, we refer only to the relatively easier measurable dimensions, viz. the material and immaterial features of society. We will coin the material dimension economic well-being (EWB) and the immaterial dimension social well-being (SWB).

The first dimension is in the development literature sometimes also referred to as 'access to resources'; for example, in the HDI index (Human Development Index) the EWB is a key component of material welfare usage (see Osberg and Sharpe, 2005). In regard to SWB, the literature usually refers to social aspects of life, such as human health, education, labour market participation, etc.

Our study proposes a new approach to measure differences among regions based on a simultaneous consideration of economic and social aspects of welfare. More specifically, our approach aims to assess the ability of a country to improve its EWB as a stepping stone to increase the level of its multi-faceted SWB. The combined assessment of EWB and SWB offers then a proxy for the *socio-economic performance* of a country. From a dynamic perspective, the analysis of the socio-economic performance of regions or nations over time offers also the possibility to address *socio-economic convergence* at national or regional levels.

The paper is organized as follows: Section 2 outlines our approach for the assessment of socio-economic convergence. In Section 3 we specify some center-pieces of economic and social convergence. Section 4 will present empirical results on welfare disparities among Italian regions, while finally, in Section 4 some brief conclusions are drawn.

2 AN ASSESSMENT METHOD FOR SOCIO-ECONOMIC CONVERGENCE

In this section we present a conceptual scheme to assess the performance of a country in the broad sense as previously stated, i.e., including in the empirical analysis economic and social aspects of 'life' of a region. We do not develop here a new theoretical model; instead, our approach provides mainly an empirical way to analyse the socio-economic performance of regions. We have based our analysis on previous statistical analyses and on recent criticisms from the applied economics literature on traditional studies on growth and economic convergence. We will first offer some propositions.

These propositions are based on some challenging suggestions of Kuznets: "*the most distinctive feature of modern economic growth is the combination of a high rate of aggregate growth with disrupting effects and new problems*" (Kuznets, 1973, p.257). This statement implies the need to expand the national accounting framework in order to consider both some relevant costs (i.e., pollution, urban concentration, commuting, etc.) and positive returns (i.e., better health, longevity, more leisure, less income inequality, etc.). To reach these aims, Kuznets suggested to give more attention to "*the uses of time and to households as the focus of economic decisions not only on consumption but also on investment*" (Kuznets, 1973, p.258).

In the light of these arguments and observations, we outline the rationale of our study on the basis of the following propositions:

Proposition 1: GDP of most developed and developing countries (regions) has increased largely over the time. As argued by Baumol "…*effective growth policy does contribute to a nation's living standards, but it may also help other industrialized countries and to almost the same degree*…" (Baumol, 1986, p.1079).

Proposition 2: Increase in per-capita GDP is a basic prerequisite for improving living standards of the population.

Proposition 3: Increase in living standards implies a rise in the economic and social aspects of living.

The concept of living standards has to be interpreted in a broad sense. This is supported by the following statement on the broad interpretation of the welfare concept: "*since people derive utility or well-being not merely from the command over income alone*" (Neumayer, 2003, p.276). From this observation, we take for granted that living standards are composed of relevant and tailor-made economic and social well-being constituents.

An important point is that the analysis of a country's (or region's) socio-economic performance cannot be limited exclusively to either economic or social aspects; they have to be considered together in a consistent framework.

With regard to EWB, the most common variable used in the literature is GDP. Clearly, GDP – as many scholars have convincingly demonstrated – is not able to catch the real economic performance of a country or region in terms of economic well-being. In fact, since well-being is a concept closely related to individual perceptions and feelings, it seems plausible that a measure focused on the demand-side fits better than one on the supply-side, in order to assess EWB. But which measure do we have to deploy? In our study, various measurable and relevant categories of total household consumption (THC) are used. Our view is that THC mirrors the increase in income, the change in life styles, the change in labour market participation and family organization, the change in technology, etc. It is essential to note here that a rise in EWB implies both an increase in consumption levels (for specific categories) and a change in the consumption basket. In particular, according to Engel's law, an increase in income implies normally a change in the composition of the consumption basket in favour of non-primary (e.g., luxury) goods. This is confirmed by Abramovitz and Kuznets who argue : "*as follower's levels of per capita income converge on the leader's, so their structures of consumption and prices*" (Abramovitz, 1986, p. 369), and "…*the growth rate of productivity is high and, indeed, mirrors the great rise in per capita product and in per capita pure consumption*" (Kuznets, 1973, p. 250).

As far as the evaluation of SWB is concerned, we need to assess indicators of different dimensions of the quality of life, such as conditions on the labour market, quality of education, social infrastructure, health conditions, etc. This calls for extensive and comparable data bases. It is now clear that, if we include in our assessment scheme also the time dimension, the rationale described above will also allow us to deal with the concept of economic and social convergence over time. This idea can be illustrated by a simple scheme (see Figure 1) to analyse differences among countries over time; it is based on the reviewed literature and the above propositions. In our view, this constitutes the first step of an operational analysis of spatial disparities, the second being the search for adequate statistical tools to analyse both socio-economic performance and convergence among countries.

It is also evident from Figure 1 that the concept of *socio-economic well-being* overlaps with that of *living standards.* Both concepts include both economic and social aspects, which are measured by consumption variables and some relevant social indicators, respectively. In a time perspective, the analysis of these concepts allows us to disentangle the concept of convergence into economic convergence and social convergence. In the next section, these concepts will be further addressed.

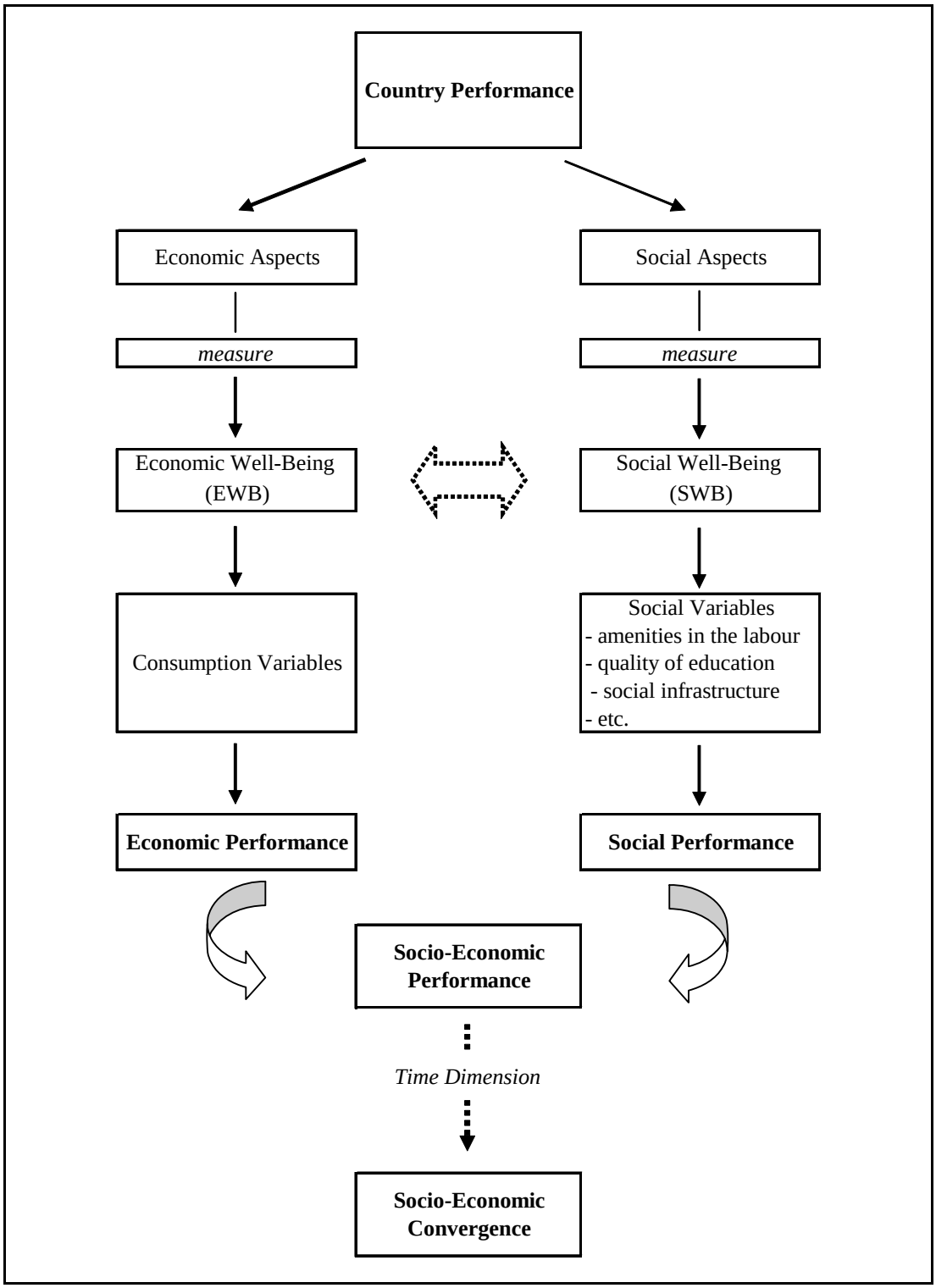

Fig. 1 Conceptual scheme to assess economic and social performance of countries

3 ECONOMIC AND SOCIAL CONVERGENCE

In economic growth theory, economic convergence refers to the narrowing of the gap between rich and poor regions or countries and is associated with indicators of a region's or country's well-being, namely, traditionally, GDP or labour productivity. As stated, we will focus on consumption as an appropriate statistical measure and proxy for economic well-being. It is a widely held belief that advanced economies are characterized by a consumption culture, a culture in which what we consume and the way in which we consume goods and services have come to represent our socio-economic identity and influence our interaction with others (e.g., demonstrative or conspicuous consumption).

Our society is indeed more consumption-driven than production-led and as a consequence social and economic changes can be identified through consumption patterns. As a matter of fact, the notion of 'standard of living' refers to different aspects of a typical household's everyday life that may be adequately approximated by the expenses for different categories of goods and services. We may thus state that total consumption, decomposed into different categories, mirrors – better than income – the real conditions of population with regard to basic needs (food, clothing and housing), services (medical care, education, transportation and communication), recreation, and luxury goods. Moreover, some expenses, due to their high variability among countries, can be seen as proper statistical measures for mapping out spatial welfare differences and analysing spatial convergence trends.

Next, we have to address the social convergence concept, which also needs an operational meaning, but as far as the authors know, there is not yet a uniformly accepted definition. However, it is noteworthy that, in the recent literature on growth, social aspects of well-being are often stressed; both social well-being and quality of life, as interchangeable concepts, are used. We offer here some examples from the literature.

Easterly (1999) found, despite a remarkable diversity of indicators, that quality of life across countries tends to be positively correlated with per capita income. The indicators cover different aspects, such as individual rights, political instability, education, health, transportation and communication, and inequality across class and gender.

Cracolici and Vassallo (2002) defined an index of quality of life for 103 Italian regions using different indicators: the number of newspapers per 1000 inhabitants, the per capita average regional public expenses for entertainment and cultural events, the ratio between female and male activity rate, the youth unemployment rate, the ratio between banking investments and deposits, and the social and economic infrastructures.

Moreover, in the context of the EUROMODULE initiative, Delhey et al. (2002) proposed a new instrument to monitor and systematically analyze the current state and the changes in living conditions and quality of life in Europe. They combine indicators of objective living

conditions (e.g., income), subjective well-being (e.g., income satisfaction) and quality of society (e.g., income distribution).

And finally, among the convergence literature, Hobijn and Franses (2001) considered four social indicators: daily protein, calorie supply, infant mortality rate, and life expectancy at birth. Next Neumayer (2003) tested for convergence in a wide range of basic aspects of living standards, namely life expectancy, infant survival, education enrolment, literacy, telephone and television availability. And, more recently, Giles and Feng (2005) considered five measures of social well-being, namely life expectancy, the Gini index of income inequality, the poverty rate, the tertiary education participation rate, and CO_2 emissions.

It is clear from the above studies that the concept of *social convergence*, even if not explicitly used, is implicit in many empirical frameworks and in the search for suitable indicators. This is confirmed by the following statement: "*social convergence will occur if conditions in various aspects of social life (for example, amenities in the labour market, quality of education, leisure activities, social infrastructure, conditions in the labour market and in the wider society, etc.) tend to improve faster in the countries where they are below average*" (Andolina et al., 1999, pp. 5-6). As a higher standard of social life will usually be associated with higher levels of economic well-being, social convergence may be thought as a consequence of economic convergence. However, this is not necessary because a high level of, say, income, can be concentrated among a low proportion of the population and thus accompanied by high unemployment in the same region and/or a high proportion of the working force in insecure and low paid jobs. Moreover, in spite of a high income, social infrastructures may still be insufficient for most of the population or badly organized in some regions (or countries) compared to others.

4 ASSESSMENT OF WELFARE DISPARITIES AMONG ITALIAN REGIONS

The measurement and assessment of spatial welfare disparities is fraught with many conceptual and statistical problems. In the international literature, there are very few examples of empirical analyses of consumption convergence. The most remarkable is the paper of Ševela (2004) which concentrated on the convergence level and dynamics of consumption expenditures between EU members and acceding countries over the period 1995-2002. She finds that for five broad categories of consumption – namely, food, alcohol and tobacco, housing, transport, recreation and culture – there is still a considerable gap between acceding and EU member economies. As in the case of expenditures on food, the general consumer behaviour is strongly dependent on the total consumption that is highly influenced by degree of economic development (p. 306). More recently, Konya and Ohashi (2005) analyzed product-level consumption patterns among countries in the OECD in the period from 1985 to 1999. Their estimation results find robust evidence of strong convergence in cross-country

consumption patterns. The paper also finds a relationship between openness of countries, namely the sum of imports and exports in GDP (i.e., a proxy of the globalization process) and the consumption patterns.

In the light of the above considerations, we will now offer an illustrative statistical exercise on Italian data with a view to interregional comparisons of welfare. In particular, we will report here the statistical features of the 2001 Istat Family Budget Survey (FBS), relating to about 21000 households and 19[1] regions. The numerous goods and services represented in Istat's FBS[2] have been split into three groups. The first group (G_1) includes expenses for food products, such as beverages, meat, bread, cereals etc. The second group (G_2) includes expenses for living such as housing, energy, transportation and communication, clothing, and medical care. Finally, in the third group (G_3) we find luxury expenses such as recreation, jewelry, personal care, etc. and expenditures on cultural, educational and entertainment activities.

On the basis of the above data we have estimated some interesting statistical indicators on Italian regions (see Table 1). Table 1 shows various summary statistics with respect to the shares of each group of goods in total consumption, namely S_{G1}, S_{G2} and S_{G3}.

The fairly equivalent values of S_{G1} are in contrast with those of the two other shares; S_{G2} appears to have the lowest variability (0.18), while having the highest median value (0.69); S_{G3} has the lowest median value (0.05), but the highest variation coefficient (2.05) and Gini index (0.53).

Table 1 Mean, median, coefficient of variation (CV) and Gini index for S_{G1}, S_{G2} and S_{G3} shares

Share	Mean	Median	CV (median)	Gini index
S_{G1}	0.229	0.217	0.514	0.275
S_{G2}	0.681	0.689	0.180	0.061
S_{G3}	0.090	0.054	2.046	0.526

By focusing on regional share variability, it can be found that the median values of S_{G1} in the 19 Italian regions range from 0.17 to 0.28, those of S_{G2} from 0.64 to 0.73, and those of S_{G3} from 0.03 to 0.08. On average, households in high-income regions (i.e., the northern and central regions) appear to spend about 17% of their total budget on food, while households in low-income regions (i.e., southern regions) spend over 27%. Moreover, in regard to luxury

[1] In this survey, Piemonte and Valle d'Aosta are considered as one region.

[2] The Istat FB is a diary-based survey, complemented with the most recent recommendations of Eurostat. The aim of the survey is to measure consumption, which is defined as all goods and services bought (or consumed from own production) by private households to satisfy their needs. The sample design is formed by three stages. Firstly, about 480 towns are selected. Then, about 2600 households per month are randomly chosen from the populations registered in the sample towns. Finally, a single diary is used to record the daily expenditures of each household for a period of 10 consecutive days.

items, we see that, on average, southern regions spend less than 7% of their total budget on luxury items, while northern and central regions spend up to 10% of their budget on the same items. Based on S_{G2}, three different clusters of regions can be identified**.** The first group, including Piemonte and Valle d'Aosta, Liguria, Trentino, Veneto and Friuli, spends 70% of their total income on items in this group. The second group, including Emilia-Romagna, Tuscany, Umbria, Marche, Lazio and Abruzzo, spends 60%, while the third group, which includes the southern regions, spends 65%.

The above descriptive analysis highlights the strong disparities among Italian regions in terms of a different composition of consumption expenditures, which is expression of a different life style. Clearly, the emphasis on using consumption variables for analysing spatial differences and time convergence, is justified from our previous studies which demonstrate for Italian regions, that convergence in GDP is not associated with convergence in consumption.

We note here that Cuffaro et al. (2000) used as a proxy for economic well-being the share of luxury expenses in total consumption. The results, used for a panel of households over the period 1980-1996 by a panel unit root test, indicated that the convergence process of well-being occurred only for the households of the northern regions. A different statistical analysis, performed on macro data and on four broad categories of consumption – i.e., food, housing, clothes, and other expenses – indicated a weak convergence on housing and clothes over the period 1970-1981. The same occurred over the period 1981-1995 for other items, like recreation, entertainment, luxury goods and so on, but not for food which exhibited a strong divergence (Cuffaro et al., 2002; Cuffaro, 2003).

The choice of indicators to measure social convergence is not immediately obvious at the outset, because it depends also on the main features of the countries analyzed, for instance, whether they are developed or developing. The above mentioned studies do not devote much attention to this problem. For example, the indicators chosen by Hobijn and Franses (2001) – who analyse contemporaneously both developed and developing countries – can well discriminate between the two groups of countries, but fail to take into account different levels of well-being within developed countries. In fact, by using a measurement on the basis of these indicators, developed countries are quite homogeneous.

The analytical and policy issues at stake are certainly complex and call for solid empirical research. A good example can be found in an OECD (1982) study, which listed eight broad categories of social indicators to represent well-being: health, education and learning, employment and quality of working life, time and leisure, command over goods and services, physical environment, social environment and social safety. Even though these indicators are available for a large number of countries, there is a lack of values in various years. This is the case, for example, for World Bank data sets. This constitutes a big problem, especially when a convergence analysis would have to be performed.

5 CONCLUSION

The recent literature on convergence has stressed the evidence that convergence in GDP per capita does not imply convergence in other social indicators. This has changed the perspective of earlier convergence analyses that have focused on living standards, broadly defined. Indeed, it is necessary to address the lack of any connection between convergence in income and convergence in living standards. Our study has aimed to fill this gap by proposing a rationale that is applicable.

After some basic propositions, we have re-defined the convergence issue, not only in terms of economic convergence, but also in terms of social convergence. To this aim, we have outlined an operational logical scheme in which future research can be positioned and nested. In our scheme, the economic aspects of living standards (i.e., economic well-being) are represented by different categories of consumption expenditures, while the social aspects (i.e., social well-being) are represented by indicators of health, education, labour market, etc. Obviously, our scheme is not exhaustive and additional aspects could be considered as well (e.g., aspects related to the environment); anyway, at this moment, our analysis constitutes a new attempt to combine in a consistent framework the *material* (i.e., economic) and *immaterial* (i.e., social) aspects of living.

Focusing the analysis of convergence on living standards is entirely consistent with the ultimate goal of European integration. The Treaty on the Union has emphasised the "*economic and social cohesion*" of countries and has obliged the European Commission to prepare a report on it every three years. The Monetary Union (EMU) is also a tool to increase human welfare in Europe or, as it is written in the Treaty on the Union, for "*the raising of the standard of living and quality of life*" (article 2).

Against this policy background, it is evident that the assessment of the growth process of a region or country prompts the need for an operational integrative framework where economic and social dimensions are connected. That is, a new concept of growth may be introduced: 'growth in quality'.

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